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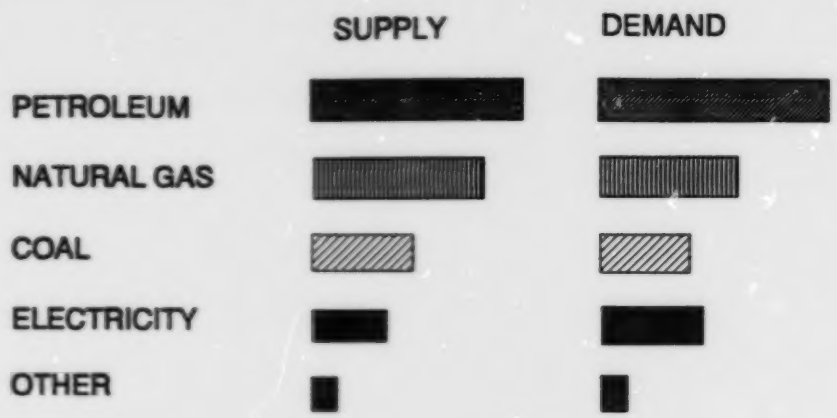

REVIEW OF 1989 CANADIAN ENERGY STATISTICS

INFORMATION SYSTEMS SECTION
MONITORING AND INFORMATION SYSTEMS DIVISION
ECONOMIC AND FINANCIAL ANALYSIS BRANCH

January 1991

Cette publication est également offerte en français.

PREFACE

This publication provides key historical energy data from 1971 to 1989. Special focus is placed on the information for 1989 and some of the events that have affected energy prices, production, consumption, and investment in that year. The data contained in this publication were taken from EMR's Energy Statistics Handbook, Statistics Canada's CANSIM database and EMR's Energy Information Systems Database.

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INTRODUCTION

Highlights for the energy sector in 1989 were:

- In general, higher world oil demand, coupled with a shortfall in North Sea and Alaskan production, resulted in higher crude oil prices in 1989.

  Unlike petroleum product prices, however, natural gas prices declined in all sectors.

- Electricity prices tracked closely the increase in the Consumer Price Index.

- Crude oil production averaged 266.4 10^3m^3/day in 1989, down 8.1 10^3m^3/day from 1988 levels. This decrease was largely attributed to declines in production from established pools and lower oil drilling activity, reflecting better opportunities in natural gas investments.

- On an annual basis, sales of refined petroleum products averaged 248.4 10^3m^3/day during 1989, an increase of about 3.2 percent or 8 10^3m^3/day.

- Natural gas production increased by 5.5 percent from 102.3 billion cubic metres in 1988 to 108.4 billion cubic metres in 1989 due to higher domestic demand and exports.

- Electricity generation decreased by 1.7 percent in 1989, to 482.2 TW.h. The decrease was mainly attributed to lower water flows in Labrador and Quebec and soft export markets in the U.S. Northwest and California which reduced B.C. Hydro's generation for export purposes. Of the total electricity generated in 1989, 460.1 TW.h was for use in Canada and the remaining 22.1 TW.h was exported.

- The United States continued to be the main market for Canada's uranium output, accounting for 42.0 percent of total exports in 1989.

ENERGY PRICES

- In general, higher world oil demand, coupled with a shortfall in North Sea and Alaskan production, resulted in higher crude oil prices in 1989. The crude price for the West Texas Intermediate increased from $15.96/bbl in 1988 to $19.58/bbl in 1989 the highest level since 1985.

- The differential between Canadian and international crude oil prices narrowed in 1989 as a result of the appreciation of the Canadian dollar (from U.S. 0.81¢ in 1988 to U.S. 0.84¢ in 1989).

- At the retail level, heating oil prices remained stable whereas gasoline prices experienced increases of 3.9¢/l in the case of leaded gasoline and 2.3¢/l in the case of unleaded gasoline. The gap between leaded and unleaded gasoline prices amounted to only 0.3¢/l as a result of the federal surcharge on leaded gasoline to discourage its use.

- Unlike petroleum product prices, however, natural gas prices declined in all sectors.

- Electricity prices tracked closely the increase in the Consumer Price Index.

Summary Table - Energy Prices *

	1988	1989	%Change
Crude Oil			
W.T.I. - Cushing (US$/Bbl) (40°API, 0.4% S)	15.96	19.58	22.7
Exchange Rate (CAN./U.S.)	1.2307	1.1842	-3.8
(CDN $/Bbl)	19.64	23.19	18.1
Canadian Par Crude - Edmonton (CDN $/Bbl) (40°API, 0.5% S)	18.65	22.17	18.9
Selected Products			
Gasoline (Unleaded ¢/litre)	49.3	51.6	4.7
Heating Oil (¢/litre)	30.6	30.2	-1.3
Natural Gas (Residential ¢/m^3)	18.39	17.33	-5.8
Electricity (Residential ¢/KWh)	5.61	5.89	5.0

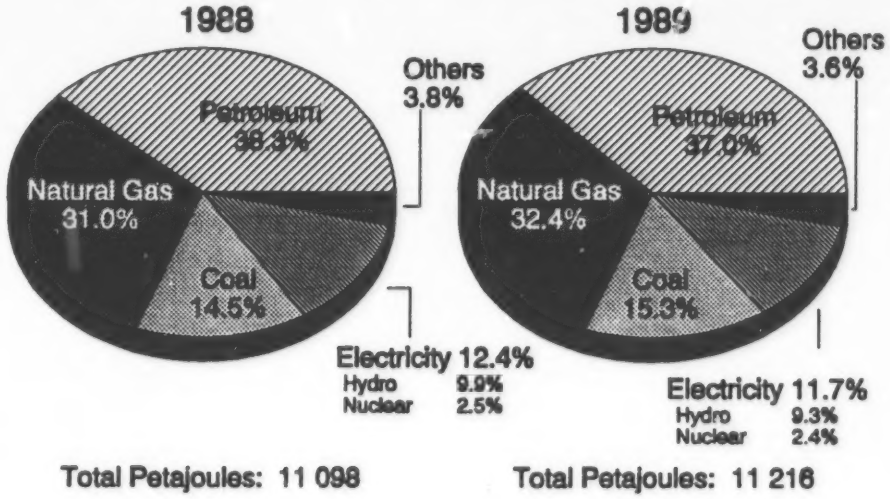
* For additional details, see annex table A1

ENERGY PRODUCTION AND DOMESTIC DEMAND

Production

- Primary energy production recorded a historic high in 1989 reaching 11 216 petajoules, an increase of 118 petajoules over 1988 production levels. This increase was largely fuelled by higher domestic demand.

Chart 1
Primary Energy Production by Type



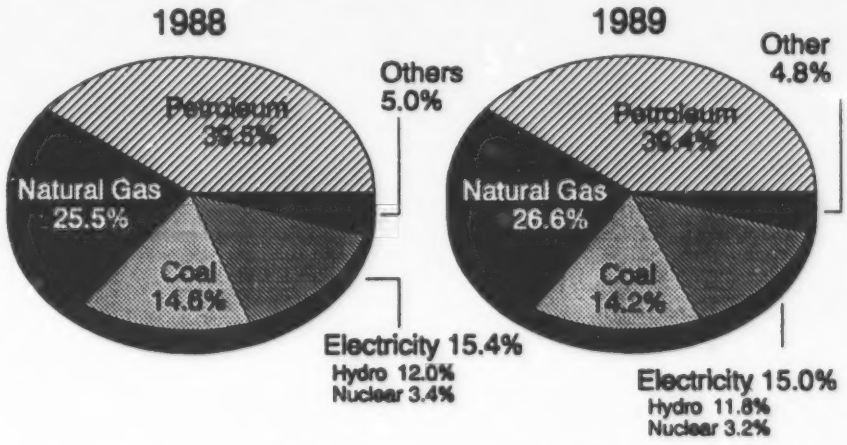
- The petroleum share of primary energy production fell from 38.3 percent in 1988 to 37.0 percent in 1989 as a result of lower export demand. On the other hand, the share of natural gas rose from 31.0 percent in 1988 to 32.4 percent in 1989.
- The coal share of primary energy production increased from 14.5 percent in 1988 to 15.3 percent in 1989, reflecting higher thermal electricity generation.
- The share of hydro and nuclear electricity production decreased from 12.4 percent in 1988 to 11.7 percent in 1989.

Domestic Demand

- The most important influences upon primary energy consumption in 1989 were higher economic growth, lower energy prices and colder temperatures[1]. These factors mainly resulted in an increase of 230 petajoules in 1989. Total consumption averaged 8 534 petajoules in 1989.

Chart 2

Primary Energy Demand by Type

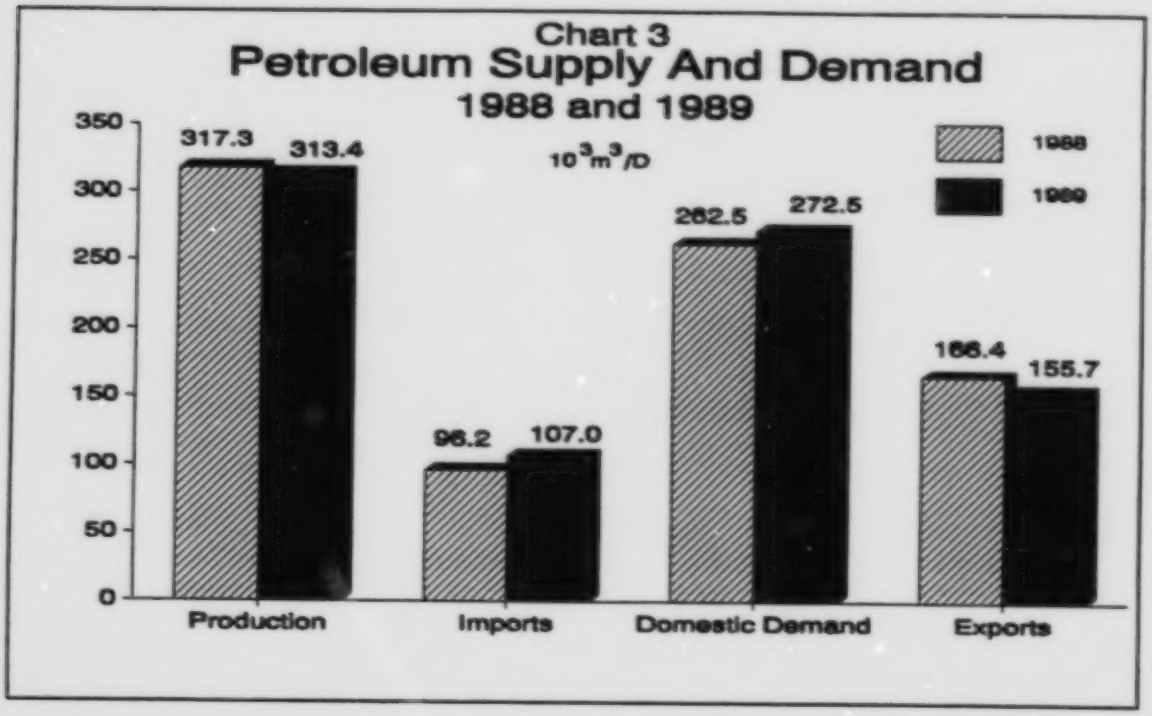


- The breakdown of total demand by fuel (see chart 2) shows that:
  - the share of petroleum products remained virtually unchanged;
  - the share of natural gas increased from 25.5 percent in 1988 to 26.6 percent in 1989;
  - the share of coal dropped slightly from 14.6 percent in 1988 to 14.2 percent in 1989; and
  - the share of hydro and nuclear electricity averaged 15.0 percent in 1989, down from 15.4 percent in 1988.

[1]Based on degree-day data, 1989 was about 6 percent colder than 1988.

Petroleum

- Petroleum includes crude oil and equivalents (pentanes, condensates) and liquified petroleum gases (ethane, propane and butane). The major use of crude oil and equivalents is the production of refined petroleum products. The overall balances, in 1988 and 1989, for petroleum production and demand are shown in chart 3 while similar data for the period 1971-1989 are provided in annex table A3.



- Focusing on the overall results:

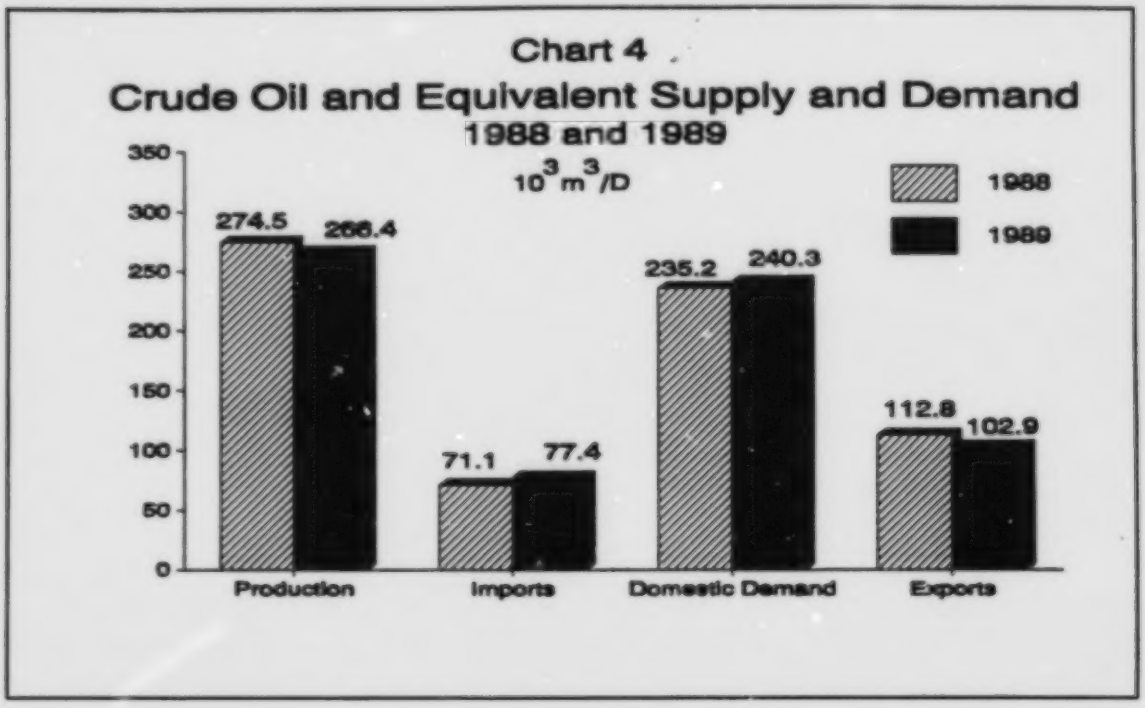
  - petroleum production in Canada declined slightly from 317.3 10^3m^3/day in 1988 to 313.4 10^3m^3/day in 1989;

  - the 10 10^3m^3/day increase in domestic demand in 1989 was, therefore, largely satisfied by increased imports; and

  - petroleum exports declined by 6.7 percent from 166.4 10^3m^3/day in 1988 to 155.7 10^3m^3/day in 1989.

To understand the sources of these changes, it is useful to examine the major components of petroleum.

Crude Oil and Equivalent



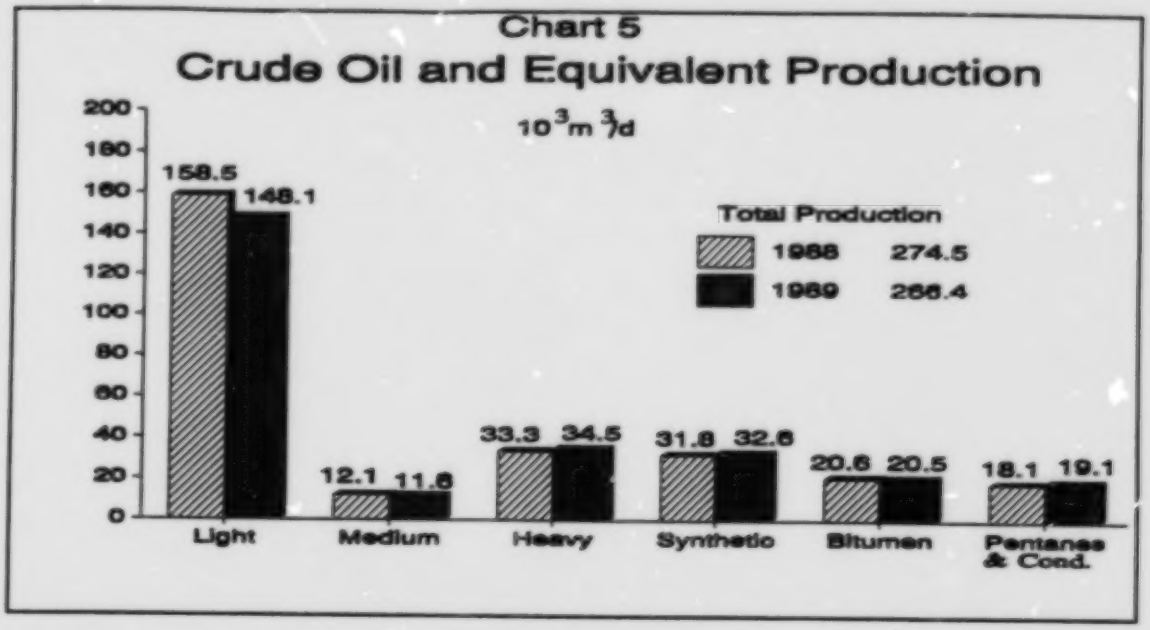
- Crude oil production averaged 266.4 10^3m^3/day in 1989, down 8.1 10^3m^3/day from 1988 levels. This decrease was largely attributed to declines in production from established pools and lower oil drilling activity, reflecting better opportunities in natural gas investments. By production type:

  - light and medium oil production declined by 10.9 10^3m^3/day; and

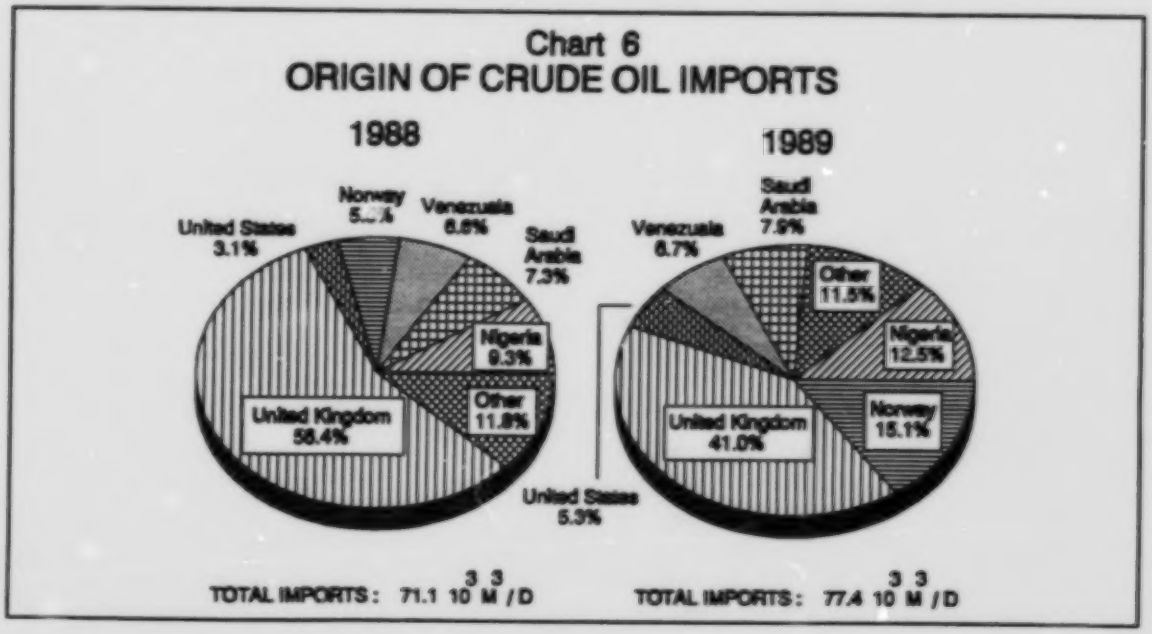
  - all other production (heavy, synthetic, bitumen and pentane) recorded small gains of about 2.9 10^3m^3/day.

- Domestic demand averaged 240.3 10^3m^3/day, representing an increase of 2.2 percent over 1988 levels. The increase stemmed chiefly from higher economic growth and colder temperatures.

- Net crude exports declined by 38.8 percent from 41.7 10^3m^3/day in 1988 to 25.5 10^3m^3/day in 1989.



- The origin of crude oil imports as displayed in the chart below shows that the U.K. accounted for 41 percent of total crude imports followed by Norway at 15.1 percent and Nigeria at 12.5 percent. It is interesting to note that the U.K.'s share of total imports dropped from 56.4 percent in 1988 to 41 percent in 1989. This decline reflects the shortfall in U.K. production due the Piper Alpha accident in the North Sea.

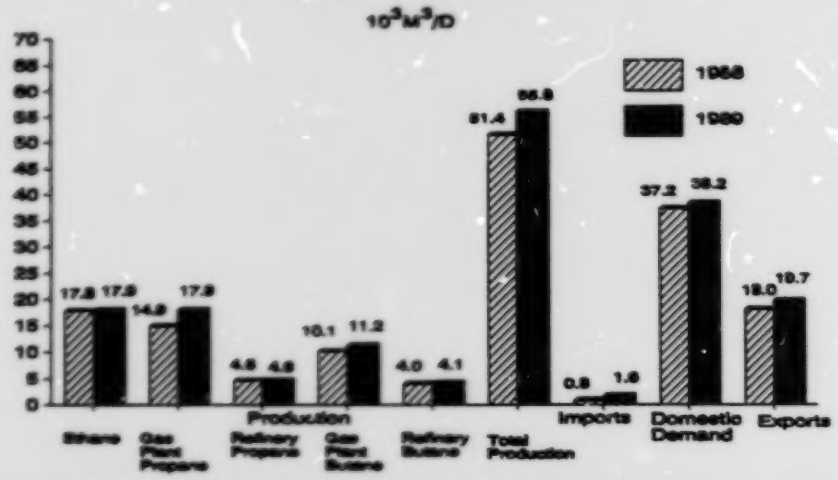


Ethane, Propane and Butane

Chart 7

Ethane, Propane & Butane Supply and Demand

1988 and 1989



- Trends in the natural gas liquids markets (comprised of supplies from gas plants and refineries) in the 1970s and 1980s are provided in annex table A5 and highlights for 1988 and 1989 in chart 7.

- In summary:

  - gas plant and refinery production of ethane, propane and butane increased 8.6 percent from 51.4 10^3m^3/day in 1988 to 55.8 10^3m^3/day in 1989;

  - LPG imports doubled from 0.8 10^3m^3/day in 1988 to 1.6 10^3m^3/day in 1989;

  - LPG exports increased 6.5 percent from 18.0 10^3m^3/day in 1988 to 19.7 10^3m^3/day in 1989; and

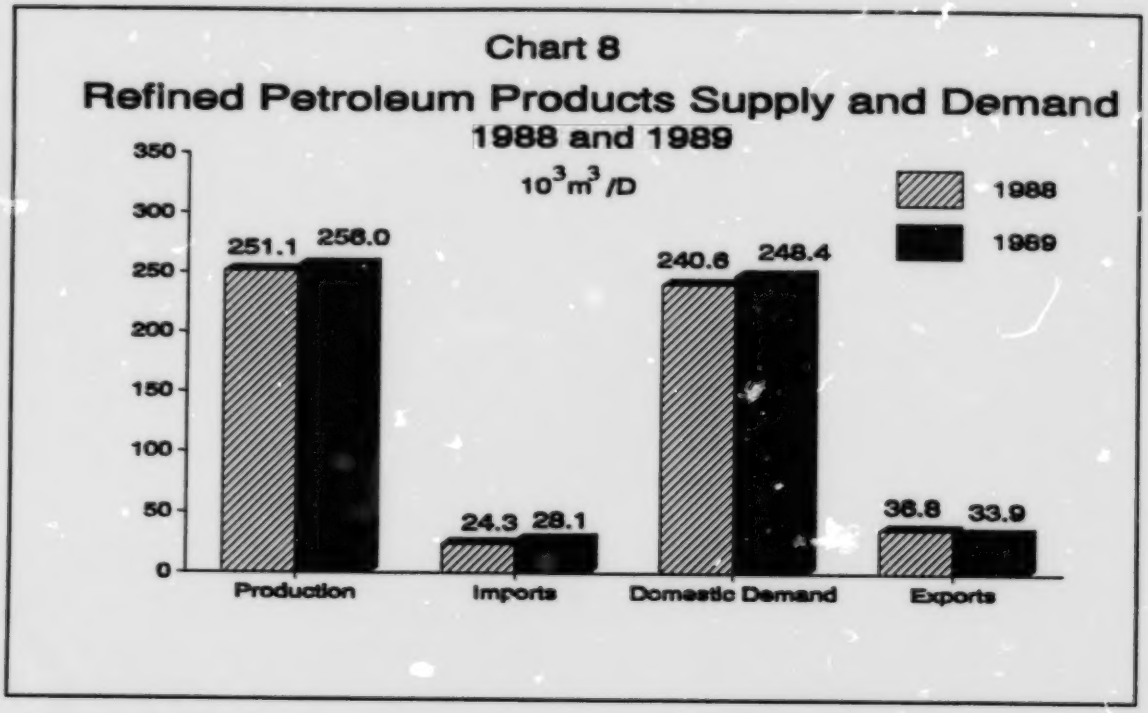
  - LPG consumption increased 2.7 percent from 37.2 10^3m^3/day in 1988 to 38.2 10^3m^3/day in 1989.

- Production by type of LPG:

  - In 1989 production of ethane accounted for 32.1 percent of total LPG production as did the production of gas plant propane.

  - Refinery production of propane accounted for 8.3 percent of LPG production in 1989 and refinery production of butane 7.4 percent. Gas plant butane production accounted for the remaining 20.1 percent of total production.

Refined Petroleum Products



- In line with the increase in domestic demand, refined petroleum production increased to 256.0 10^3m^3/day in 1989 from 251.1 10^3m^3/day in 1988.

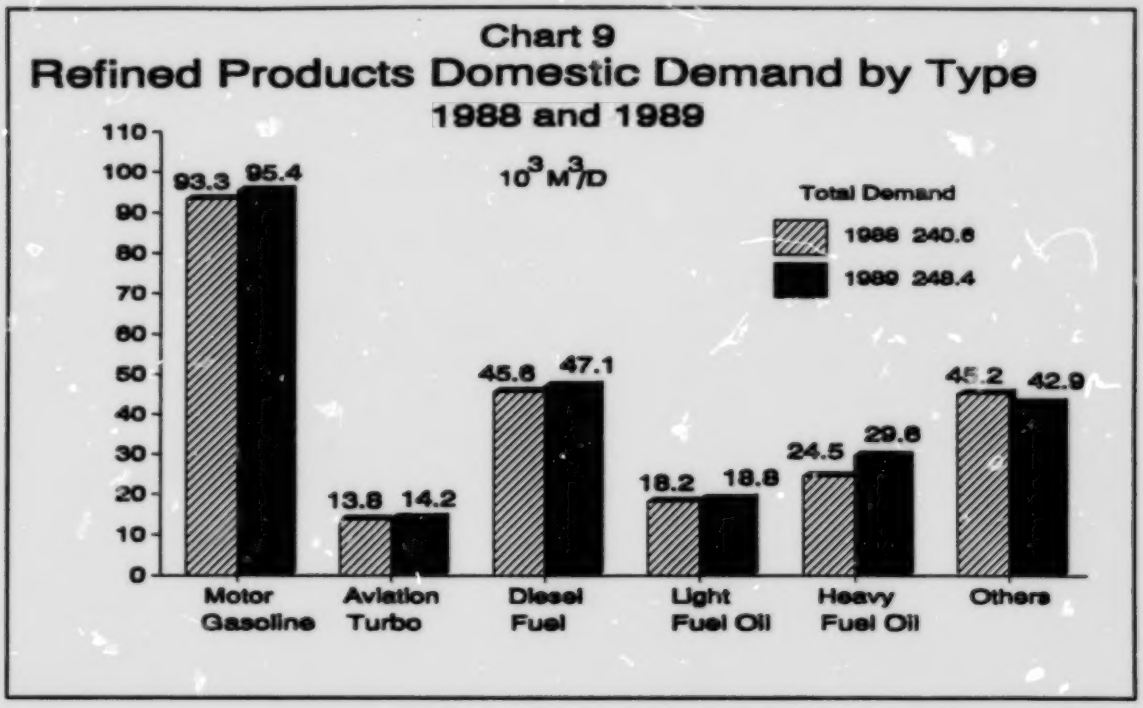
- On an annual basis, sales of refined petroleum products averaged 248.4 10^3m^3/day during 1989, an increase of about 3.2 percent or 7.8 10^3m^3/day. The breakdown by major products as presented in chart 9 shows that in 1989:

  - motor gasoline increased by 2.3 percent, slightly below the increase of 3.2 percent in total product demand;

  - heavy fuel oil was up 5.1 percent 10^3m^3/day and accounted for the lion's share of the overall increase in total product demand; and

  - aviation turbo fuel, diesel, and light fuel oil experienced small increases of 0.5 to 1.5 10^3m^3/day.

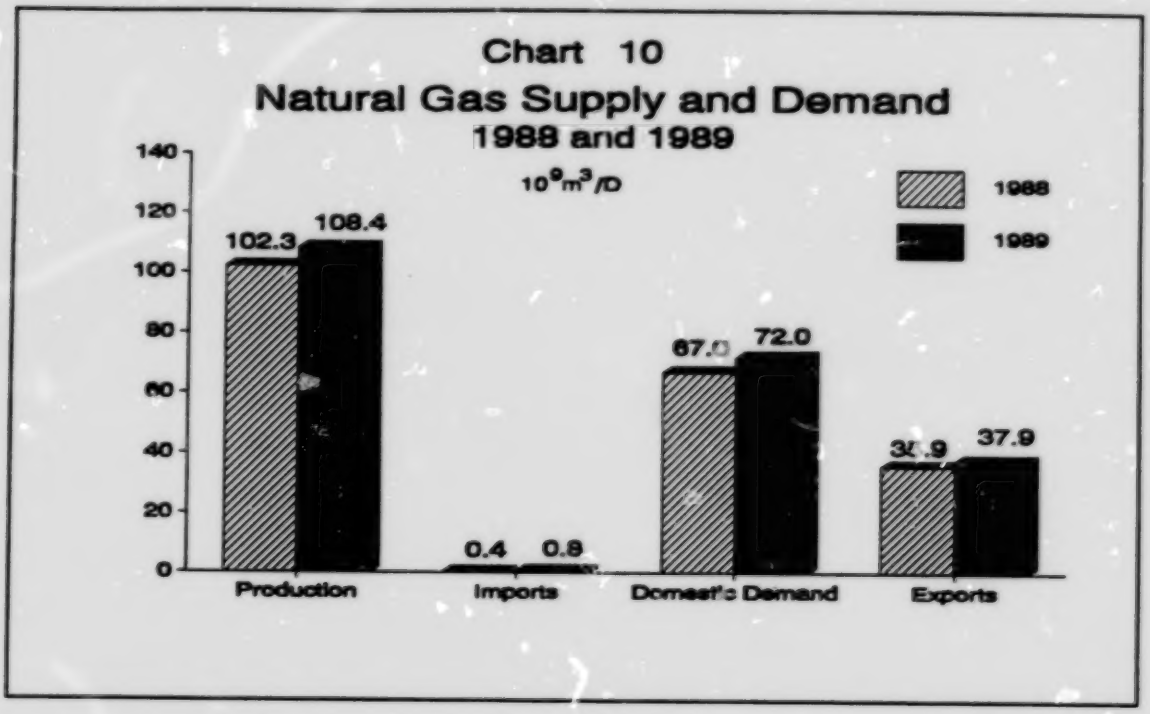
- As in the case of crude oil, Canada's refined petroleum product trade surplus also declined in 1989.



Other products include petrochemical feedstocks, naptha specialties, aviation gasoline, aviation turbo fuel (naptha and kerosene), kerosene stove oil, asphalt, coke, lubricating oils and greases, waxes and candles, still gas, as well as unfinished products.

NATURAL GAS

Summary statistics for the Canadian natural gas markets are presented in the chart below and in the annex table A7.



- In brief:

  - natural gas production increased by 5.9 percent from 102 billion m^3 in 1988 to 108 billion m^3 in 1989 due to higher domestic demand and exports;

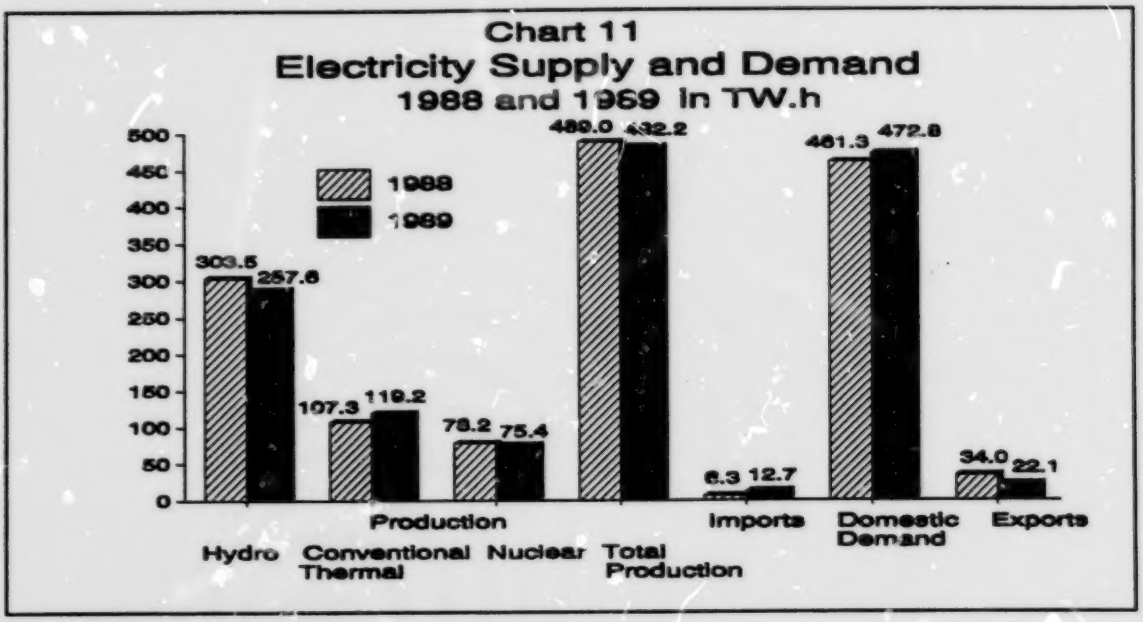
  - domestic consumption increased 7.5 percent from 67.0 billion m^3 in 1988 to 72.0 billion m^3 in 1989. Of this amount, 51.8 billion m^3 was direct consumer use, 3.6 billion m^3 was used to produce electricity, 11.6 billion m^3 for producer consumption and 5.0 billion m^3 for non-energy use and statistical differences;

  - natural gas exports reached 37.9 billion m^3 - the highest level ever - a 5.6 percent increase over 1988 levels; and

  - even though natural gas imports doubled from 0.38 billion m^3 in 1988 to 0.77 billion m^3 in 1989 they still represent only 1.0 percent of domestic demand.

ELECTRICITY

- Electricity generation decreased by 1.7 percent in 1989 to 482.2 TW.h. The decrease is mainly attributed to lower water flows in Labrador and Quebec and soft export markets in the U.S. Northwest and California which reduced B.C. Hydro's generation for export purposes. Of the total electricity generated in 1989, 472.8 TW.h was for use in Canada and the remaining 22.1 TW.h was exported.



- The breakdown of electricity generation by source shows that:

  - hydro accounted for about 60 percent of electricity generation;

  - thermal accounted for about 25 percent of electricity generation; and

  - nuclear for the remaining 15 percent.

- At the provincial level, as reported in annex tables A9 to A11, hydro generation accounted for more than 88 percent of the total electricity generation in Newfoundland, Quebec, Manitoba, British Columbia and the Yukon. In Alberta, about 79 percent of the generation came from coal, 73 percent for Saskatchewan and 60 percent for Nova Scotia. In Ontario, coal, nuclear and hydro production were well balanced while in New Brunswick total generation came from a mix of oil, nuclear, hydro and coal.

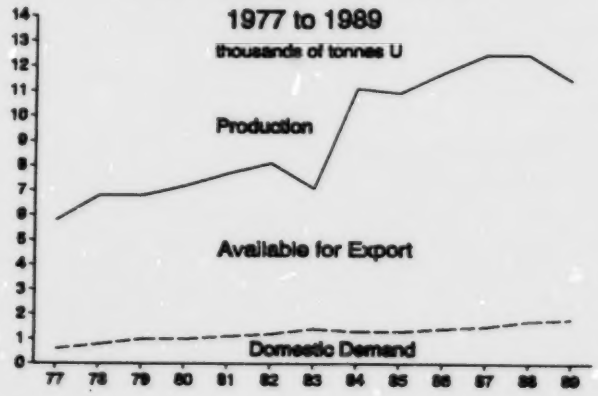
- Domestic demand for electricity for Canada (annex table A8) increased only 2.5 percent in 1989 which is less than half of the 5.3 percent registered in 1988 and below the historical average of 4.5 percent in the 1971-1989 period.

- The downward trend in electricity exports to the U.S. which began in 1988 as a result of higher domestic demand and drought conditions continued in 1989 with exports averaging 22.1 TW.h down from 34.0 TW.h in 1988.

Chart 12

Uranium Production and Domestic Demand

1977 to 1989

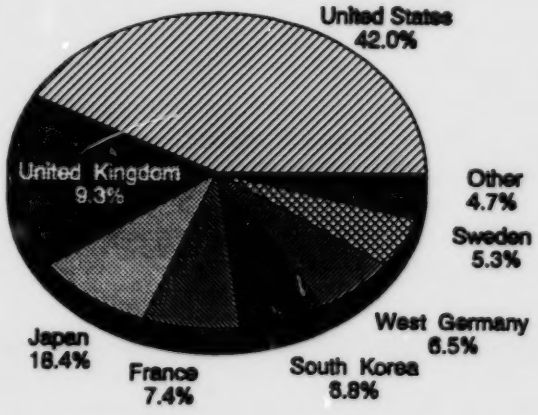


- Uranium production decreased by 7.7 percent from 12.4 thousand tonnes U in 1988 to 11.4 thousand tonnes U in 1989.
- From 1988 to 1989 the estimated domestic demand for uranium for nuclear power plants increased by 5.9 percent from 1.7 to 1.8 thousand tonnes U.

Chart 13

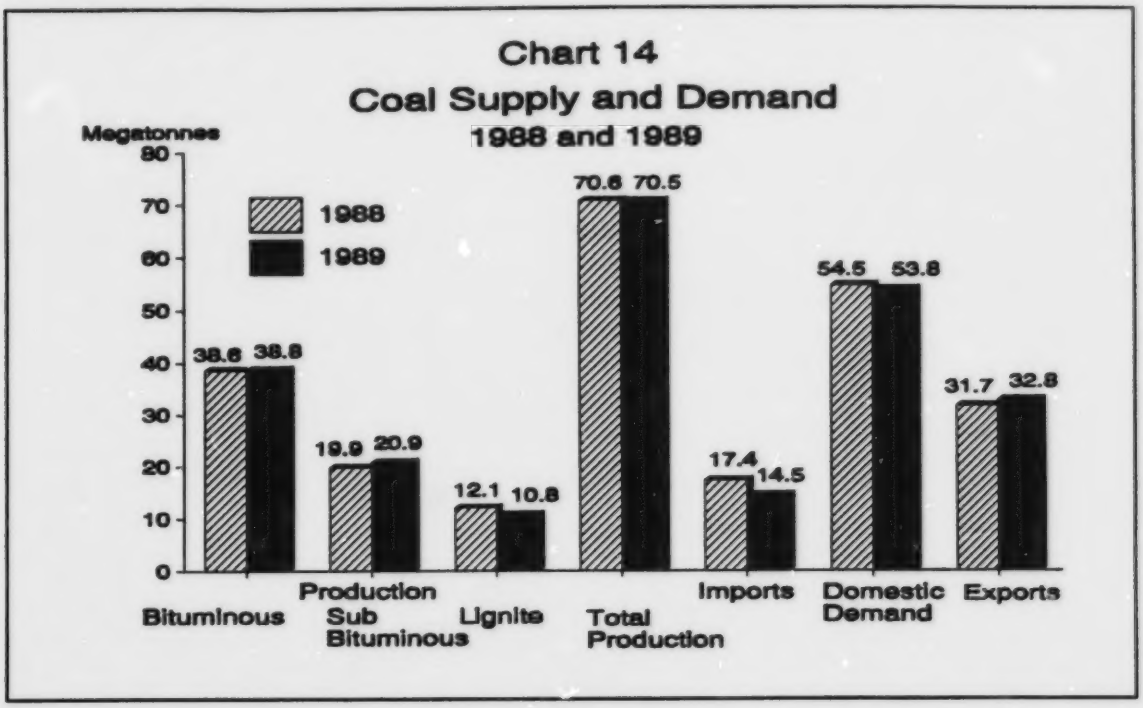
Uranium Exports by Destination

1989 Percentage Shares



Actual Exports : 9.4 thousand tonnes

- The United States continued to be the main market for Canada's uranium output, accounting for 42.0 percent of the exports in 1989. Japan continued to be an important customer accounting for 18.4 percent of uranium exports.



- Coal production decreased 0.2 percent from 70.6 megatonnes in 1988 to 70.5 megatonnes in 1989.
- Coal imports decreased 16.6 percent from 17.4 megatonnes in 1988 to 14.5 megatonnes in 1989.
- Coal exports increased 3.5 percent from 31.7 megatonnes in 1988 to 32.8 megatonnes in 1989.
- Coal consumption decreased 1.3 percent from 54.5 megatonnes in 1988 to 53.8 megatonnes in 1989.

ENERGY INVESTMENT

- According to Statistics Canada's survey of private and public investment, energy investment expenditures averaged $17.5 billion in 1989, representing an increase of approximately $1.5 billion over 1988.

- The breakdown of energy capital expenditures by industry shows that:

  - investment in the oil and natural gas industry experienced a significant decline from $5.6 billion in 1988 to $4.3 billion in 1989 (exploratory and development well completions plunged by 39.0 percent in 1989). This can be partly explained by the exceptional increase in 1988 which occurred in anticipation of the phase-out of fiscal incentives such as the Canadian Exploration and Development Incentive Program (CEDIP) and various provincial royalty holidays. In addition, 1989 was characterized by company mergers and acquisitions which resulted in a shift from exploration and development investment to asset management;

  - expenditures in the refining and marketing industry were up by approximately $200 million; and

  - capital spending in the electric power industry increased substantially from $7.0 billion in 1988 to $8.9 billion in 1989. This increase stemmed chiefly from outlays on the Darlington project in Ontario and additions to LG-2 in Quebec and hydro investments in Manitoba.

Energy Investment by Major Industry

	1988	1989
		$ millions
Petroleum and Natural Gas		
Exploration and Production	5 590	4 349
Refining and Marketing	1 177	1 359
Natural Gas Processing and Distribution	875	939
Pipelines and Drilling	846	1 554
Total Petroleum and Natural Gas	8 488	8 201
Coal Mines and Coal Products	345	326
Electric Power Systems	6 971	8 863
Uranium Mines	139	102
Total Energy Investment	15 943	17 492
Total Investment	122 925	134 347

For additional details see annex tables A16 to A18.

Real Domestic Product

- Real domestic product (RDP) for the energy sector as a whole showed only 0.7 percent growth in 1989 and its share in the economy's production of goods and services dropped marginally from 6.6 percent in 1988 to 6.5 percent in 1989. The stagnant RDP growth for the energy sector stemmed from small decreases in the crude petroleum and natural gas and electric power utilities industries.

- In line with the RDP estimates, capacity utilization rates for the energy sector dipped slightly in 1989 averaging 92.2 percent vs 92.8 percent in 1988.

Economic Output		
	1988	1989
GDP (1986 constant $ at factor cost)	$ millions	
Crude Petroleum and Natural Gas	11 355	11 342
Petroleum and Coal Products	1 952	2 007
Coal Mines	983	985
Gas Distribution	1 705	1 837
Electric Power Utilities	13 969	13 817
Pipeline Transport	2 599	2 817
Total Energy	32 563	32 805
Total Economy	491 014	506 092
Prices	Index 1986 = 100	
Energy Component of the CPI	103.2	106.8
CPI Excluding Energy	109.1	114.7
CPI	108.6	114.0
Investment	Percent	
Energy Investment as a Share of		
Total Investment	13.0	13.0

For additional details see annex tables A19 and A20.

Prices

- The energy component of the Consumer Price Index (CPI) posted a 3.5 percent increase in 1989 compared with a 5.0 percent increase in prices for all consumer goods and services. However, due to the declining share of energy in the total basket of consumer goods and services, the lower energy price increase relative to all other consumer items had only a marginal impact on overall consumer prices (CPI increase of 5.0 percent vs 5.1 percent for the CPI excluding energy).

Energy Investment

- Energy investment expenditures in 1989 accounted for 13.0 percent of total investment expenditures in Canada, the same as in 1988.

ANNEX TABLES

In the following annex tables, data for stock changes, losses and adjustments are not shown. Stock changes, losses and adjustments account for the differences between total supply and total demand.

A1. ENERGY PRICES

	1988	1989	% Change
Crude Oil W.T.I. - Cushing (US$/Bbl) (40 API, 0.4% S)	15.96	19.58	22.7
Exchange Rate (Can./U.S.)	1.2307	1.1842	-3.8
(Cdn $/Bbl)	19.64	23.19	18.1
Crude Oil (dollars per cubic metre)			
Domestic Wellhead Average, Edmonton	112.35	133.62	18.9
Refiners Acquisition Costs, Montreal	121.84	143.34	17.6
Imported Crude	125.24	144.18	15.1
Crude Exports	97.96	118.83	21.3
Petroleum Products (cents per litre)			
Retail Domestic Heating Oil	30.6	30.2	-1.3
Gasoline: Leaded	47.4	51.3	8.2
Unleaded	49.3	51.6	4.7
Automotive Diesel Fuel	47.1	47.4	0.6
Commercial and Industrial			
Light Fuel Oil (No.2)	21.6	21.1	-2.3
Heavy Fuel Oil (No.6)	10.8	11.2	3.7
Natural Gas			
Residential (cents per cubic metre)	18.39	17.33	-5.8
Commercial (cents per cubic metre)	15.54	14.79	-4.8
Industrial (cents per cubic metre)	10.48	9.11	-13.1
Export (cents per gigajoule)	217.58	211.08	-3.0
Electricity (monthly consumption cents per KW.h)			
Residential (1 000 KW.h)	5.61	5.89	5.0
Commercial (500 000 KW.h)	4.76	5.97	4.4
Industrial (3 100 000 KW.h)	3.86	4.03	4.4
Export (interruptible)	2.59	3.08	18.9
Coal			
Import	56.47	55.08	-2.46
Export (FOB, per tonne) (p)	62.93	63.93	1.59

A2. PRIMARY ENERGY SUPPLY AND DEMAND

1971-1989

Period	Production	Imports	Total Supply	Domestic Demand	Exports	Total Demand
			Petajoules			
1971	7 049	2 403	9 452	6 279	3 191	9 470
1972	7 959	2 627	10 586	6 617	3 986	10 603
1973	8 758	2 772	11 530	6 930	4 646	11 576
1974	8 594	2 405	10 999	7 172	4 022	11 194
1975	8 019	2 448	10 467	6 984	3 464	10 448
1976	7 779	2 258	10 037	7 210	2 872	10 082
1977	8 049	2 124	10 173	7 437	2 597	10 034
1978	8 080	1 945	10 025	7 682	2 474	10 156
1979	8 840	1 973	10 813	7 987	2 711	10 698
1980	8 631	1 831	10 462	8 050	2 367	10 417
1981	8 355	1 704	10 059	7 804	2 237	10 041
1982	8 445	1 357	9 802	7 469	2 342	9 811
1983	8 588	1 157	9 745	7 402	2 502	9 904
1984	9 370	1 328	10 698	7 608	2 983	10 591
1985	9 926	1 280	11 206	7 762	3 552	11 314
1986	9 714	1 502	11 213	7 704	3 439	11 143
1987	10 221	1 660	11 881	7 840	3 853	11 693
1988	11 098	1 916	13 014	8 304	4 614	12 918
1989	11 216	2 024	13 240	8 534	4 606	13 140

A3. PETROLEUM SUPPLY AND DEMAND SUMMARY

1971-1989

Year	Production	Imports	Total Supply	Domestic Demand	Exports	Total Demand
			Thousand Cubic Metres per Day			
1971	252.4	130.7	383.1	243.3	133.7	377.0
1972	291.1	147.9	439.0	259.4	178.5	437.9
1973	335.6	153.3	489.0	271.8	212.9	484.7
1974	317.6	141.7	459.3	277.0	177.6	454.6
1975	276.4	137.2	413.6	273.1	142.3	415.5
1976	254.7	121.1	375.8	278.4	103.8	382.2
1977	255.9	115.4	371.4	282.9	84.3	367.2
1978	253.8	106.0	359.8	289.9	80.3	370.3
1979	291.0	102.1	393.1	301.0	91.9	392.9
1980	280.6	94.9	375.5	297.7	76.9	374.6
1981	256.6	87.8	344.4	281.1	68.3	349.4
1982	252.5	61.1	313.7	250.5	74.2	324.7
1983	264.8	48.3	313.1	236.2	87.6	323.8
1984	282.1	53.3	335.4	237.0	99.5	336.5
1985	287.8	58.3	346.1	241.2	121.0	362.2
1986	286.4	75.6	362.1	241.3	128.7	370.1
1987	302.7	86.9	389.6	248.9	138.6	387.6
1988	317.3	96.2	413.5	262.5	166.9	429.4
1989	313.4	107.0	420.4	272.5	155.7	428.2

A4. CRUDE OIL AND EQUIVALENT SUPPLY AND DEMAND SUMMARY

1971-1989

Year	Production	Imports	Total Supply	Domestic Demand	Exports	Total Demand
			Thousand Cubic Metres per Day			
1971	235.3	106.4	341.7	221.1	118.8	339.9
1972	270.2	125.4	395.6	242.3	151.3	393.6
1973	312.1	136.7	448.8	264.6	180.2	444.8
1974	293.0	130.3	423.3	280.1	143.9	424.0
1975	250.9	130.8	381.8	269.2	112.1	381.2
1976	229.6	114.6	344.2	267.9	74.5	342.4
1977	230.5	106.4	336.9	284.2	51.9	336.1
1978	227.6	97.8	325.4	286.0	42.3	328.3
1979	256.6	97.0	353.6	307.2	45.9	353.1
1980	244.6	88.1	332.6	298.5	32.6	331.1
1981	220.2	80.9	301.1	277.4	25.9	303.3
1982	217.6	53.9	271.5	236.8	34.0	270.8
1983	230.2	39.3	269.5	225.6	46.5	272.0
1984	243.7	38.9	282.6	225.2	56.5	281.7
1985	250.0	45.0	295.0	218.9	77.5	296.4
1986	250.3	56.4	306.7	214.6	93.0	307.6
1987	261.6	64.3	325.9	223.0	98.7	321.7
1988	274.5	71.1	345.6	235.2	112.8	348.0
1989	266.4	77.4	343.8	240.3	102.9	343.1

A5. ETHANE, PROPANE AND BUTANE SUPPLY AND DEMAND SUMMARY

1971-1989

Year	Production		Imports	Total Supply	Domestic Demand	Exports	Total Demand
	Gas Plant	Refinery					
	Thousand Cubic Metres per Day						
1971	17.1	3.2	-	20.3	10.7	9.2	19.9
1972	20.9	3.0	-	23.9	11.5	12.4	23.9
1973	23.5	3.5	-	27.0	12.3	14.7	27.0
1974	24.6	3.8	-	28.4	13.7	16.6	30.3
1975	25.5	4.0	-	29.5	13.4	16.4	29.8
1976	25.1	5.2	-	30.3	12.1	18.8	30.9
1977	25.4	5.4	-	30.8	11.9	20.2	32.1
1978	26.2	6.2	-	32.4	12.1	17.6	29.7
1979	34.4	6.7	-	41.1	13.8	26.9	40.7
1980	36.0	7.2	-	43.2	17.1	25.1	42.2
1981	36.5	7.6	-	44.1	18.2	24.6	42.8
1982	35.4	7.6	-	42.9	17.1	27.0	44.2
1983	34.6	8.9	-	43.5	20.9	22.0	42.9
1984	38.4	9.1	-	47.5	25.0	22.0	47.0
1985	37.8	8.9	-	46.7	30.7	19.0	49.7
1986	36.1	7.8	0.5	44.5	31.5	13.6	45.1
1987	41.4	8.4	0.6	50.3	33.3	14.7	47.9
1988	42.8	8.6	0.8	52.2	37.2	18.0	55.2
1989	47.0	8.8	1.6	57.3	38.2	19.7	58.0

A6. REFINED PRODUCTS SUPPLY AND DEMAND SUMMARY

1971-1989

Year	Production	Imports	Total Supply	Domestic Demand	Exports	Total Demand
			Thousand Cubic Metres per Day			
1971	222.6	24.3	246.9	236.8	5.8	242.6
1972	245.0	22.5	267.5	252.8	14.8	267.6
1973	269.6	16.7	286.3	265.3	18.1	283.4
1974	283.5	11.4	294.8	269.3	17.2	286.5
1975	274.1	6.4	280.5	266.8	13.9	280.7
1976	276.0	6.5	282.5	276.2	10.6	286.8
1977	293.3	9.1	302.4	281.4	12.3	293.7
1978	295.9	8.2	304.1	288.8	20.6	309.5
1979	318.1	5.1	323.2	299.6	19.4	318.9
1980	309.4	6.9	316.3	292.0	20.2	312.2
1981	287.1	6.9	293.9	274.0	19.4	293.3
1982	246.9	7.3	254.2	245.6	14.4	260.1
1983	235.9	8.9	244.8	228.6	20.1	248.7
1984	238.0	14.4	252.5	226.8	22.1	248.9
1985	233.7	13.2	247.0	226.2	25.7	251.9
1986	228.7	18.7	247.4	225.8	23.4	249.3
1987	239.7	22.0	261.7	230.7	27.0	257.7
1988	251.1	24.3	275.4	240.6	36.8	277.4
1989	256.0	28.1	284.0	248.4	33.9	282.3

A7. NATURAL GAS SUPPLY AND DEMAND SUMMARY

1971-1989

Year	Production	Imports	Total Supply	Domestic Demand	Exports	Total Demand
			Million Cubic Metres			
1971	na	406.5	na	na	25800.9	na
1972	na	444.5	na	na	28594.0	na
1973	77853.3	419.9	78273.1	49828.0	29092.8	78920.8
1974	76161.7	379.8	76541.4	49702.3	27166.3	76868.5
1975	77512.6	289.5	77802.0	50269.2	26826.5	77095.6
1976	77246.1	114.8	77360.8	49693.3	27013.5	76706.8
1977	81128.0	0.6	81128.6	51662.5	28441.1	80103.6
1978	78162.2	1.8	78164.0	52604.1	24956.9	77560.9
1979	85699.2	2.1	85701.3	56559.5	28343.8	84903.3
1980	78082.4	3.2	78085.5	55899.8	22562.8	78462.6
1981	75538.8	3.0	75541.8	53367.7	21583.8	74951.5
1982	77041.5	4.6	77046.1	53666.2	22196.7	75862.9
1983	72443.6	3.8	72447.4	53172.4	20169.3	73341.7
1984	79427.4	3.6	79431.0	57703.1	21401.6	79104.7
1985	87010.7	5.1	87015.7	62072.6	26152.9	88225.5
1986	81572.3	260.4	81832.6	59640.2	21090.1	80730.3
1987	88534.7	93.3	88628.0	60640.2	28008.8	88648.9
1988	102342.3	384.5	102726.8	66983.4	35912.8	102896.2
1989	108399.2	771.8	109171.1	72026.0	37911.6	109937.7

A8. ELECTRICITY SUPPLY AND DEMAND SUMMARY

1971-1989

Period	Hydro	Thermal	Nuclear	Total Prod.	Imports	Total Supply	Domestic Demand	Exports	Total Demand
				TW.h					
1971	160.5	51.5	4.0	215.1	-	215.1	215.1	-	215.1
1972	179.9	53.5	6.7	240.2	-	240.2	240.2	-	240.2
1973	192.8	56.2	14.3	263.3	-	263.3	263.3	-	263.3
1974	210.9	55.5	13.9	280.3	-	280.3	280.3	-	280.3
1975	202.4	59.1	11.9	273.4	-	273.4	273.4	-	273.4
1976	212.8	64.8	16.4	294.0	-	294.0	294.0	-	294.0
1977	220.1	71.8	24.9	316.8	2.7	319.5	299.6	19.9	319.5
1978	234.0	72.2	29.4	335.6	2.1	337.7	316.2	21.6	337.7
1979	242.9	76.0	33.3	352.2	1.8	354.0	322.7	31.4	354.0
1980	251.0	79.8	35.9	366.7	2.9	369.6	339.4	30.2	369.6
1981	263.1	77.6	37.8	378.5	1.5	380.0	344.7	35.4	380.0
1982	255.2	85.1	36.2	376.5	2.9	379.3	345.1	34.2	379.3
1983	263.4	85.9	46.2	395.5	2.8	398.2	359.8	38.4	398.2
1984	283.4	92.2	49.3	424.9	2.3	427.2	385.8	41.4	427.2
1985	300.7	88.6	57.1	446.4	2.7	449.1	406.1	43.0	449.1
1986	307.7	80.9	67.2	455.8	5.0	460.8	421.8	38.9	460.8
1987	313.2	96.0	72.9	482.1	3.5	485.6	438.2	47.4	485.6
1988	303.5	107.3	78.2	489.0	6.3	495.4	461.3	34.0	495.4
1989	287.6	119.2	75.4	482.2	12.7	494.9	472.8	22.1	494.9

A9. GENERATION OF ELECTRICITY FROM HYDRO SOURCES BY PROVINCE

1971-1989

Period	Nfld.	N.S.	N.B.	Que.	Ont.	Man.
			TW.h			
1971	..	..	..	..	..	..
1972	10.9	0.8	3.0	77.8	41.3	10.4
1973	19.4	0.8	3.1	80.0	40.8	11.4
1974	28.3	0.7	2.6	83.9	41.5	14.2
1975	35.3	0.6	2.2	75.8	38.4	14.3
1976	38.8	0.8	3.4	77.0	38.4	12.7
1977	40.6	0.8	3.0	82.7	36.4	11.1
1978	44.0	0.8	2.0	85.4	39.2	17.0
1979	42.2	1.2	3.1	88.4	42.2	20.4
1980	44.9	0.9	2.7	97.6	40.2	19.1
1981	44.2	1.2	3.8	102.7	38.2	17.9
1982	43.1	1.0	2.6	99.8	37.5	20.5
1983	39.4	1.0	3.1	108.4	40.5	21.9
1984	44.8	1.0	3.1	118.5	40.8	21.2
1985	39.6	0.9	2.3	133.4	41.2	22.4
1986	39.1	1.0	3.1	144.3	41.1	23.8
1987	37.8	0.8	2.2	152.1	34.6	19.3
1988	39.7	1.1	2.6	143.4	38.3	15.4
1989	32.8	0.9	2.4	138.4	38.6	18.3

A9. GENERATION OF ELECTRICITY FROM HYDRO SOURCES BY PROVINCE

1971-1989

Period	Sask.	Alta.	B.C.	N.W.T. Yukon	Canada
		TW.h			
1971	..	..	..	..	160.5
1972	3.1	1.6	30.8	0.4	179.9
1973	2.5	1.5	32.8	0.5	192.8
1974	3.1	1.7	34.4	0.5	210.9
1975	2.7	1.4	31.0	0.5	202.4
1976	2.5	1.7	37.0	0.6	212.8
1977	2.1	1.5	41.2	0.6	220.1
1978	2.5	1.8	40.6	0.6	234.0
1979	2.4	1.4	41.0	0.6	242.9
1980	2.5	1.7	40.9	0.6	251.0
1981	3.1	2.0	49.4	0.5	263.1
1982	2.4	1.6	46.1	0.5	255.2
1983	2.2	1.5	44.9	0.5	263.4
1984	1.7	1.4	50.2	0.5	283.4
1985	1.9	1.4	57.1	0.6	300.7
1986	3.8	1.8	48.9	0.7	307.7
1987	3.2	1.5	61.1	0.7	313.2
1988	2.3	1.4	58.6	0.7	303.5
1989	2.8	1.6	51.1	0.7	287.6

A10. GENERATION OF ELECTRICITY FROM CONVENTIONAL THERMAL SOURCES BY PROVINCE

1971-1989

Period	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.
			TW.h			
1971	..	..	..	..	..	..
1972	0.4	0.3	3.8	3.3	0.5	27.6
1973	0.4	0.3	4.0	3.2	0.4	25.0
1974	0.5	0.4	4.7	3.0	0.3	27.3
1975	0.5	0.4	4.9	2.5	0.3	28.3
1976	0.5	0.4	4.9	3.3	0.3	32.6
1977	0.4	0.4	5.0	5.1	0.5	34.4
1978	0.9	0.2	5.4	5.8	0.5	33.5
1979	1.3	0.2	5.0	6.1	0.5	33.6
1980	1.4	0.1	6.0	6.6	0.2	34.1
1981	0.5	--	5.4	5.1	0.2	34.9
1982	1.2	--	5.5	5.5	0.2	36.9
1983	0.6	--	5.2	3.7	0.1	37.9
1984	0.8	--	6.2	4.1	0.1	39.0
1985	1.8	--	6.6	3.7	0.1	32.0
1986	1.3	--	6.4	3.8	0.1	26.0
1987	2.3	0.1	7.0	5.3	0.2	33.9
1988	1.4	0.1	7.8	8.0	0.3	36.9
1989	2.0	0.1	8.2	10.0	1.6	37.6

A10. GENERATION OF ELECTRICITY FROM CONVENTIONAL THERMAL SOURCES BY PROVINCE

1971-1989

Period	Man.	Sask.	Alta.	B.C.	N.W.T. Yukon	Canada
			TW.h			
1971	..	..	..	..	..	51.5
1972	0.5	3.6	10.9	2.3	0.2	53.5
1973	0.8	5.0	12.1	4.9	0.2	56.2
1974	0.3	4.3	12.7	1.9	0.2	55.5
1975	0.5	4.4	13.7	3.5	0.2	59.1
1976	1.3	5.1	14.2	2.0	0.2	64.8
1977	1.4	6.3	16.3	1.9	0.1	71.8
1978	0.5	6.3	17.3	1.8	0.2	72.2
1979	0.2	6.7	20.2	2.3	0.1	76.0
1980	0.4	6.6	21.7	2.5	0.2	79.8
1981	0.5	6.6	22.5	1.6	0.3	77.6
1982	0.3	7.5	25.6	2.1	0.3	85.1
1983	0.2	8.1	27.5	2.3	0.2	85.9
1984	0.3	9.8	29.6	2.1	0.2	92.2
1985	0.4	9.9	31.9	2.0	0.2	88.6
1986	0.2	8.1	32.9	1.8	0.2	80.9
1987	0.6	9.3	35.3	2.0	0.2	96.0
1988	0.9	10.6	38.7	2.4	0.2	107.3
1989	0.4	10.7	41.7	6.6	0.2	119.2

A11. GENERATION OF ELECTRICITY FROM NUCLEAR SOURCES BY PROVINCE

1971-1989

Period	N.B.	Quebec	Ontario	Canada
		TW.h		
1971	..	..	..	4.0
1972	-	0.6	6.1	6.7
1973	-	-	14.3	14.3
1974	-	-	13.9	13.9
1975	-	-	11.9	11.9
1976	-	-	16.4	16.4
1977	-	--	24.8	24.9
1978	-	-	29.4	29.4
1979	-	-	33.3	33.3
1980	-	-	35.9	35.9
1981	-	-	37.8	37.8
1982	0.3	-	35.9	36.2
1983	4.8	2.0	39.5	46.2
1984	5.0	3.4	40.8	49.3
1985	5.4	3.2	48.5	57.1
1986	5.2	3.8	58.2	67.2
1987	5.1	4.7	63.1	72.9
1988	5.3	5.3	67.6	78.2
1989	5.3	4.8	65.3	75.4

A12. URANIUM SUPPLY AND DEMAND SUMMARY

1977-1989

Year	Production	Domestic Demand	Available for Exports
		Tonnes U	
1977	5794	560	5234
1978	6803	800	6003
1979	6817	980	5837
1980	7152	1000	6152
1981	7722	1100	6622
1982	8075	1200	6875
1983	7143	1400	5743
1984	11169	1300	9869
1985	10880	1300	9580
1986	11723	1400	10323
1987	12435	1500	10935
1988	12393	1700	10693
1989	11400	1800	9600

A13. COAL SUPPLY AND DEMAND SUMMARY

1971-1989

Year	Production	Imports	Total Supply	Domestic Demand	Exports	Total Demand
			Kilotonnes			
1971	16721	16186	32907	25195	7016	32211
1972	18787	16846	35633	24228	8547	32775
1973	20472	15095	35567	24994	10288	35282
1974	21102	12370	33472	24817	10523	35340
1975	25293	15820	41113	25513	11430	36943
1976	25475	14622	40097	28220	11857	40077
1977	28681	15439	44120	30896	12387	43283
1978	30477	14119	44596	31737	14000	45737
1979	33013	17524	50537	34753	13698	48451
1980	36664	15860	52524	37333	15269	52602
1981	40088	14844	54932	38367	15705	54072
1982	42811	15775	58586	41353	16004	57357
1983	44780	14667	59447	43649	17011	60660
1984	57402	18359	75761	48699	25138	73837
1985	60854	14620	75474	48666	27378	76044
1986	57812	13312	71124	44532	25904	70436
1987	61211	14345	75556	50140	26741	76881
1988	70644	17418	88062	54467	31725	86192
1989	70529	14521	85050	53771	32827	86598

A14. ENERGY CAPITAL EXPENDITURES

1972-1989

Period	Industries related to Petroleum and Natural Gas					
	Exploration and Production			Refining and Marketing		
	Conventional	Synthetic	Total	Refined Pet. Products	Petroleum Marketing	Total
	Millions of Current Dollars					
1972	666.	-	666.	239.	112.	351.
1973	824.	-	824.	314.	128.	442.
1974	1088.	-	1088.	425.	145.	570.
1975	1390.	-	1390.	448.	153.	601.
1976	1968.	-	1968.	341.	165.	506.
1977	2251.	-	2251.	364.	136.	500.
1978	2571.	-	2571.	308.	146.	454.
1979	3641.	245.	3886.	271.	134.	405.
1980	5324.	421.	5745.	318.	205.	523.
1981	5904.	541.	6445.	845.	264.	1109.
1982	6357.	386.	6743.	1225.	321.	1546.
1983	6141.	423.	6564.	841.	375.	1216.
1984	6452.	495.	6947.	432.	423.	855.
1985	7122.	1065.	8187.	336.	357.	693.
1986	4855.	546.	5401.	398.	345.	743.
1987	3873.	542.	4415.	670.	412.	1082.
1988	4751.	839.	5590.	699.	478.	1177.
1989	3962.	387.	4349.	870.	489.	1359.

A15. ENERGY CAPITAL EXPENDITURES

1972-1989

Industries Related To Petroleum And Natural Gas (Cont't)

Period	Natural Gas Processing Plants	Natural Gas Distribution	Total	Pipelines		Drilling Contractors	Total
				Gas	Oil		
	Millions of Current Dollars						
1972	130.	142.	272.	371.	76.	24.	1760.
1973	70.	146.	216.	284.	107.	41.	1914.
1974	138.	192.	330.	204.	58.	20.	2270.
1975	148.	193.	341.	196.	166.	27.	2721.
1976	163.	182.	345.	200.	137.	31.	3187.
1977	156.	213.	369.	282.	93.	39.	3534.
1978	219.	247.	466.	256.	56.	113.	3916.
1979	302.	263.	565.	186.	43.	128.	5213.
1980	312.	386.	698.	525.	77.	198.	7766.
1981	312.	409.	721.	1605.	141.	275.	10296.
1982	523.	518.	1041.	1916.	78.	174.	11498.
1983	196.	577.	773.	509.	152.	155.	9369.
1984	340.	604.	944.	431.	365.	44.	9586.
1985	338.	604.	942.	312.	353.	80.	10567.
1986	208.	574.	782.	255.	332.	30.	7543.
1987	174.	572.	746.	299.	204.	13.	6759.
1988	272.	603.	875.	620.	209.	17.	8488.
1989	351.	588.	939.	1336.	204.	14.	8201.

A15. ENERGY CAPITAL EXPENDITURES

1972-1989

Period	Coal			Electric Power Systems	Uranium Mines	Total Energy	Total
	Coal Mines	Coal Products	Total				
	Millions of Current Dollars						
1972	37.	5.	42.	1754.	11.	3567.	22218.
1973	39.	5.	44.	2244.	18.	4220.	26618.
1974	88.	5.	93.	2753.	35.	5151.	32882.
1975	121.	2.	123.	3957.	30.	6831.	38216.
1976	191.	3.	194.	4229.	66.	7676.	43636.
1977	248.	3.	251.	4884.	113.	8782.	46598.
1978	219.	7.	226.	5936.	180.	10258.	50360.
1979	214.	3.	217.	6364.	243.	12037.	58354.
1980	299.	7.	306.	6109.	277.	14458.	66193.
1981	576.	3.	579.	7319.	289.	18483.	79604.
1982	1024.	6.	1030.	8408.	405.	21341.	76761.
1983	1225.	2.	1227.	7770.	413.	18779.	73519.
1984	832.	4.	836.	6340.	186.	16948.	75378.
1985	471.	4.	475.	5727.	160.	16929.	90504.
1986	429.	5.	434.	5618.	144.	13739.	97086.
1987	328.	10.	338.	5946.	113.	13156.	109162.
1988	331.	14.	345.	6971.	139.	15943.	122925.
1989	316.	10.	326.	8863.	102.	17492.	134347.

A17. ECONOMIC OUTPUT

1971-1989

Gross Domestic Product In Constant 1986 Dollars-At Factor Cost

Period	Crude Petrolem and Natural Gas	Petroleum and Coal Products	Coal Mines	Gas Distribution	Electric Power	Pipeline Transport	Total Energy	Total Economy
	In Millions Of Dollars							
1971	18028.	1258.	234.	1074.	5624.	1584.	27804.	267060.
1972	21721.	1218.	286.	1196.	6381.	1963.	32764.	282176.
1973	24551.	1787.	347.	1254.	7116.	2204.	37259.	304410.
1974	23656.	1818.	266.	1305.	7745.	2154.	36945.	315621.
1975	18595.	1964.	308.	1291.	7712.	1972.	31843.	320035.
1976	16059.	1835.	214.	1349.	8476.	1898.	29831.	339251.
1977	15716.	2289.	219.	1562.	9103.	2034.	30922.	350146.
1978	12252.	2058.	322.	1439.	9561.	2019.	27652.	361078.
1979	14462.	1694.	409.	1509.	10190.	2284.	30548.	375112.
1980	10183.	1663.	379.	1621.	10602.	2038.	26485.	381992.
1981	8623.	1927.	409.	1520.	10876.	1896.	25250.	397090.
1982	8818.	1786.	432.	1481.	10520.	1858.	24895.	382575.
1983	9587.	1778.	506.	1715.	11172.	1910.	26667.	394995.
1984	9899.	1793.	808.	1693.	11795.	2050.	28037.	418717.
1985	10594.	1746.	825.	1818.	12722.	2135.	29839.	438450.
1986	9763.	1732.	755.	1653.	13166.	2126.	29194.	451840.
1987	10486.	1876.	846.	1570.	13842.	2316.	30936.	470949.
1988	11355.	1952.	983.	1705.	13969.	2599.	32563.	491014.
1989	11342.	2007.	985.	1837.	13817.	2817.	32805.	506092.

A18. ECONOMIC INDICATORS

1972-1989

Consumer Price Index For Canada

Period	Energy	All Items Excluding Energy	All Items	Energy Investment as a % of Total Investment
		1986=100 Percent		
1972	22.4	34.6	33.4	16.1
1973	24.4	37.2	36.0	15.9
1974	28.1	41.2	39.9	15.7
1975	32.0	45.5	44.2	17.9
1976	36.9	48.7	47.5	17.6
1977	41.3	52.4	51.3	18.8
1978	45.2	57.1	55.8	20.4
1979	49.6	62.2	61.0	20.6
1980	57.6	68.3	67.2	21.8
1981	74.9	75.8	75.5	23.2
1982	89.7	83.3	83.7	27.8
1983	96.7	87.9	88.5	25.5
1984	102.0	91.7	92.4	22.5
1985	107.7	95.1	96.0	18.7
1986	100.0	100.0	100.0	14.2
1987	102.6	104.6	104.4	12.1
1988	103.2	109.1	108.6	13.0
1989	106.8	114.7	114.0	13.0